UNLOCKING THE MYSTERY OF DIALECT B: A NOTE ON INCIPIENT /aɪ/-RAISING IN FORT WAYNE

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ABSTRACT: This article addresses incipient /aɪ/-raising in Fort Wayne, Indiana. Acoustic analysis of word list data from 27 participants targets both typical items (e.g., write, writing) and monomorphemic trochaic words often overlooked in previous research (e.g., Nike, bison, cyber, tiger). It reports four major /aɪ/ production patterns in the Fort Wayne data, which range on a continuum from no /aɪ/-raising to phonological raising of /aɪ/ (i.e., raising before t-flaps, a pattern of Canadian raising referred to as Dialect A). In the middle of the continuum is found the elusive Dialect B, a pattern of Canadian raising first documented by Martin Joos in 1942 in which raising occurs in write but not before t-flaps. The authors find that speakers of this type of raising tend not to raise in any trochaic words. In fact, raising in monomorphemic trochaic words, such as Nike or bison, is exceedingly rare in the Fort Wayne data. In tandem with the variation observed within Fort Wayne, the fact that raising has not yet extended into monomorphemic trochaic words further suggests that raising is incipient in this variety. The authors propose that Dialect B is not a separate dialect at all but an incipient variety of Dialect A.

KEYWORDS: sound change in progress, Canadian raising, Indiana, flapping

This article discusses variation in Canadian raising (specifically /aɪ/-raising) present in the variety of English spoken in and around Fort Wayne, Indiana. The raising of /aɪ/ appears to be incipient in Fort Wayne, probably beginning within the past 10–15 years. This article builds on our recent work in documenting the nature of /aɪ/-raising in this variety (Berkson, Davis, and Strickler 2017), but the specific aim here is to resolve a mystery in the literature on Canadian raising: as framed by Kaye (1990, 262), “Whatever happened to Dialect B?” Dialect B refers to a pattern of Canadian raising that Joos (1942) observed among Toronto area public school students whereby
/aɪ/ was raised to [ʌɪ] before voiceless sounds, as in type and write, but not before t-flaps, as in writer and writing. Dialect B speakers thus produced the word typewriter as [ˈtaɪprɪtaɪər]. This contrasted with another group of students (Joos’s group A, here referred to as Dialect A talkers) who raised both before voiceless sounds, as in type and write, and before t-flaps, as in writer, thus producing typewriter as [ˈtaɪprɪtaɪər]. In the Canadian-raising literature, as first articulated by Joos (1942), Dialect B is usually considered to be a phonetic raising dialect because raising only occurs before surface voiceless sounds, while Dialect A is considered to be a phonological dialect because the raising before the voiced t-flap is based on its underlying form rather than its phonetic form.

Although Joos (1942) reports the existence of these two groups among Toronto area public school students, Dialect B has never been subsequently documented. By 1973, Chambers concludes, “In the three intervening decades Dialect B has disappeared and Dialect A is ubiquitous throughout heartland Canada” (122). Along similar lines, Kaye (1990, 262) comments that while much phonological discussion has been fueled by Joos’s description of Dialect B, evidence corroborating its existence has proven elusive: “All that remains of Dialect B is a single datum: Joos’ transcription of the word ‘typewriter.’ Never in the course of theoretical conflict has so much been written by so many about so little. Whatever happened to Dialect B?” Moreover, not only has Dialect B not been subsequently documented in Canada, but it also has not been documented in the American varieties displaying Canadian raising. These include such varieties as those spoken in upstate New York (Vance 1987), Ann Arbor (Dailey-O’Cain 1997), Philadelphia (Fruehwald 2013, 2016), in and around Jackson and Oxford, Mississippi (Moreton 2016), and Chicago (Hualde, Luchkina, and Eager 2017), among others. Specifically, what has been found in these varieties is that when raising occurs before surface voiceless sounds, as in write, it is also present before phonologically voiceless but phonetically voiced t-flaps, as in writing.

The goal of this study is to unlock the mystery of Dialect B by examining the nature of individual variation found among the incipient /aɪ/-raisers in Fort Wayne, Indiana. We can do this because among the Fort Wayne area talkers we have recorded, there are those who instantiate the Dialect B pattern of raising: that is, they display /aɪ/-raising in type and write but not before a t-flap, as in writing. What we learn when we examine their data is that the key to understanding the Dialect B pattern is to consider a fuller range of bisyllabic trochaic words than those that are often the focus of diphthong raising investigations: in addition to pairs such as write and writing, other bisyllables, such as Nike, bison, tiger, and spider (among others), must also be considered. We elicited these items, and what we will show is that almost all
of the talkers who display a Dialect B pattern—meaning that they raise in *write* but not in *writing*—do not raise in any bisyllabic (trochaic) word form. Raising simply does not occur in such bisyllables. We will make the case that Dialect B is not a dialect at all, but rather an incipient stage of Dialect A. Consequently, Toronto public school students who displayed the Dialect B pattern in 1942 would have become Dialect A speakers by the time of Chambers (1973) and Kaye (1990).

This article is organized as follows: In the next section, we briefly discuss our findings from Berkson, Davis, and Strickler (2017) and provide data that illustrate two sample speakers, one with no raising and one with phonological raising (Dialect A). We then consider the issue of /aI/-raising in bisyllabic trochaic words and are able to document more completely the existence of an incipient raising pattern that resembles Dialect B. In Berkson, Davis, and Strickler (2017), we report only on raising in bisyllabic words where /aI/ occurred before a surface flap, as in *writing* and *riding*. We did not discuss other trochaic words, such as *Nike*, *bison*, *tiger*, and *spider*. When these words are considered, we get a different understanding of incipient /aI/-raising and the nature of Dialect B and are able to refine the analysis presented in Berkson, Davis, and Strickler (2017). Consideration of the additional trochaic words reveals that even the so-called phonological raisers, the Dialect A speakers, do not pattern identically. Rather, they are divided into two groups: those that raise in bisyllables only before *t*-flaps and those that raise in bisyllables more generally, meaning both before *t*-flaps and before surface voiceless consonants. The next section argues that the pattern of /aI/-raising found in the Fort Wayne area truly represents an incipient variety. We then propose an answer to the question posed by Kaye (1990, 262), “Whatever happened to Dialect B?” Here, by exploring the full range of patterns of individual variation among our Fort Wayne talkers, we will make the case that Dialect B is not a separate dialect since it is not an endpoint; rather, it is an incipient stage of Dialect A. Given the range of patterns that we find among our Fort Wayne area talkers, we will discuss how /aI/-raising might progress through the lexicon. Finally, our article concludes by discussing why other researchers have not been able to document the Dialect B pattern of raising.

**BACKGROUND**

In an earlier study (Berkson, Davis, and Strickler 2017), we documented incipient /aI/-raising in and around Fort Wayne, Indiana, motivated by a casual observation that college students from that region had begun to display /aI/-raising within the past decade or so. The goal was to document an incipient
/ɑə/-raising dialect in light of the work by Fruehwald (2016), who in his study on /ɑə/-raising in the Philadelphia Neighborhood Corpus (PNC; Labov and Rosenfelder 2011) maintained, “There is, in fact, no detectable period where the pattern of /ɑə/-raising aligned with what would be predicted on purely phonetic grounds. The conclusion I draw is that the period of purely phonetic conditioning either was too brief to be identified or was nonexistent” (404). Fruehwald based his observation on the realization that, in the PNC, once a speaker displayed raising before surface voiceless sounds as in write, the same speaker also had raising before underlyingly voiceless but surface voiced t-flaps, as in writing. This means that the Dialect B pattern where raising occurs in write but not in writing is not acoustically documented in the PNC.

In fact, to our knowledge, the Dialect B pattern had not been acoustically documented in any /ɑə/-raising variety until Berkson, Davis, and Strickler (2017). Data reported therein were from 27 talkers (16 female, 11 male) who at the time of recording (2016 and early 2017) ranged in age from 19 to 78 years old. Rather than conducting sociolinguistic interviews, we had speakers read a word list. The speakers were recorded on a Marantz PMD661 solid state audio recorder with an ElectroVoice Cobalt 9 microphone, either on the Indiana University’s Bloomington campus (where recordings were conducted in a WhisperRoom sound-attenuated booth) or in the area around Fort Wayne (where recordings were conducted in quiet rooms, often in the homes of participants). Speakers produced three repetitions of a 93-item word list that contained 37 /ɑə/ targets. These included monosyllabic words (e.g., lice, bike, write vs. buy, lies, ride); bisyllabic trochaic words (e.g., writing, citing, Nike, bison vs. riding, spider, cyber, tiger); and trisyllabic words with primary stress on the second syllable, meaning that the voiceless sound following the diphthong of interest was not foot-internal (e.g., citation, psychotic, Titanic). The latter group will not be our focus here, although they are of interest because raising is reported not to occur in these words in established varieties of raising (e.g., Chambers 1973) and thus such words have played a role in the discussion concerning the prosodic environment in which Canadian raising occurs (e.g., Vance 1987; Chambers 1989; Pater 2014). Moreover, these trisyllabic items do exhibit raising for some talkers in our sample, as outlined more thoroughly below.

In Berkson, Davis, and Strickler (2017), we found four patterns of /ɑə/-raising among our Fort Wayne talkers, and these patterns can be placed on a continuum from no raising to phonological raising. Those who displayed no raising are referred to as pattern 0 talkers, while those who displayed phonological raising are referred to as pattern 3 talkers. These pattern 3 talkers raise in monosyllables before a voiceless consonant and before t-flaps—that is, they raise in both write and writing—consistent with Dialect A. In addi-
tion, we were able to document two incipient patterns: speakers with the most incipient pattern of behavior, referred to as pattern 1, had raising in words like *citation*, *titanic*, and *psychotic* but not in any other words, although monosyllables like *write* often showed offglide peripheralization. Finally, talkers with what we referred to as pattern 2 showed raising before voiceless consonants, as in *write*, but not before *t*-flaps; thus, there was no raising in *writing*. Pattern 2 is of interest because it seems to instantiate the elusive phonetic raising of Dialect B documented by Joos (1942) in Toronto.

Before we turn to the issue of the relationship between pattern 2 and Dialect B, it is useful to consider sample data for a representative pattern 0 speaker who has no raising (figure 1) and one who has the phonological raising of pattern 3 (figure 2). Here, and in the other figures presented herein, F1 (in Hertz) is plotted on an inverted y-axis so that raised vowels are higher on the graph. The time points along the x-axis represent the time-normalized F1 track in 10% intervals, with time point 1 representing the mean F1 value at the 10% mark in the vowel, time point 2 representing the 20% mark, and so forth. F1 tracks, averaged across the three repetitions of each word, are for the diphthongs in the minimal set *write/writing/riding/ride*. The metric we adopted for determining whether a diphthong is acoustically raised—namely, a difference of 60 Hertz or more in F1 height of diphthong nuclei—was established by Labov, Ash, and Boberg (2006) and used regularly since (e.g., Rankinen 2014; Nycz 2016; Strelluf 2018). Thus, the diphthong in *write* is considered raised if the F1 value at nucleus midpoint—approximately the 30% mark of a time-normalized vowel, or time point 3 on the graphs that follow—deviates by 60 Hertz or more from that of the diphthong in *ride*. Likewise, the diphthong in *writing* is raised if the F1 value at the nucleus midpoint deviates by 60 Hertz or more from that of the diphthong in *riding*. Mean duration of the diphthong (in milliseconds) for each item is also shown.

Figure 1 reveals that for the pattern 0 talker the diphthong in *ride* is consistently longest, as expected, while durational differences in preflap diphthongs are shorter or minimal. Diphthongs pattern together with regards to F1 height; meanwhile, no items show raising. For the pattern 3 talker shown in figure 2, the vowel in *ride* is longer than that in *write* and the difference extends into the preflap context such that the diphthong in *riding* is longer than the one in *writing*. With regards to F1 height, the raised diphthongs in *write* and *writing* pattern together.

Figures 1 and 2 make clear the acoustic difference between a speaker with no raising (pattern 0) and a speaker with phonological raising (pattern 3). However, in Berkson, Davis, and Strickler (2017) we reported only on raising in bisyllabic (trochaic) words where /au/ occurred before a surface flap,
**Figure 1**

Pattern 0: No Raising
Average Duration and Time-Normalized F1 of /aI/ in the Minimal Set
*write/writing/riding/ride* of a 49-Year-Old Female Talker

**Figure 2**

Pattern 3: Phonological Raising
Average Duration and Time-Normalized F1 of /aI/ in the Minimal Set
*write/writing/riding/ride* of a 35-Year-Old Female Talker
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as in writing and riding. Other trochaic words, such as Nike, bison, tiger, and spider, were not discussed. Consideration of these words provides a different understanding of the nature of Fort Wayne pattern 3 phonological raising and the relationship between the Fort Wayne phonetic raisers of pattern 2 and the elusive Dialect B. We turn to these issues in the following sections.

The four patterns of /aI/-raising we reported in Berkson, Davis, and Strickler (2017) can be placed on a continuum ranging from no raising on one end to phonological raising on the other end, with forms of phonetic raising occupying the middle of the continuum. As our understanding of the Fort Wayne data evolves, the way in which the continuum is populated—by which we mean the individual patterns that occupy positions within the continuum—becomes more clear. Of particular interest here, given our focus on the question of whatever happened to Dialect B, are the pattern 3 talkers, who display phonological raising (raising occurs in monosyllables before a voiceless consonant and before t-flaps), and the pattern 2 talkers, who display phonetic raising (/aI/ raises before a voiceless consonant as in write but not before the t-flap of writing). Recall that the Toronto area public school students of Joos (1942) displayed Dialect B if they raised in type and write but not before the t-flap in writer. At first glance, then, it would appear to be the case that Fort Wayne’s pattern 2 talkers indeed instantiate the Dialect B pattern. We contend that in order to understand whether this is truly the case—whether pattern 2 is akin to Joos’s group B—we need to consider a fuller range of bisyllabic trochaic words and not just ones like writer, writing, and riding that have flaps. As will be seen below, doing so allows us to document the Dialect B pattern more precisely. We will also consider in this section how our pattern 3 speakers treat trochaic words.

In the work on /aI/-raising, bisyllabic monomorphemic trochaic words that lack an intervocalic flap are often not considered. Joos (1942) does not discuss such words nor is there a focus on these words in Chambers (1973, 1989) or in the more acoustically oriented works by Moreton and Thomas (2007), Fruehwald (2013, 2016), or Berkson, Davis, and Strickler (2017). Words such as Nike, bison, hyper, tiger, visor, and cyber are not typically elicited in any quantity in sociolinguistic interviews, and while they are considered in Vance’s (1987) impressionistic study of three speakers from upstate New York and in Kilbury (1983, 337) as well as in Moreton’s (2016) study of speakers from in and around the Mississippi towns of Jackson and Oxford,
they are often not included in studies based on word lists or reading passages. These words are important, though, because if the purely phonetic dialect of Canadian raising (Dialect B) really exists, then raising would be predicted to occur in words like *Nike*, *bison*, and *hyper*, where the diphthong precedes a consonant that is voiceless both underlyingly and on the surface, but not in *t*-flap words, like *writing* and *writer*, or other words where /aI/ is before a voiced consonant, as in *tiger*, *visor*, and *cyber*.

With this in mind, we elicited such words in our study. The data presented here are from the same 27 talkers discussed in Berkson, Davis, and Strickler (2017); see above for additional demographic and methodological details and table 1 (at the end of this section) for an overview of the distribution of talkers by pattern. What we find is that almost all pattern 2 talkers (who raise in *write* but not in *writing*) fail to raise in any of the bisyllabic trochaic words. In other words, it is not only the case that they do not raise in *writing*, they also do not raise in *Nike* and *bison*, where the diphthong occurs before a phonetically and phonologically voiceless consonant. Data from a 20-year-old female talker who is representative of seven of the nine speakers who display this variety of pattern 2 raising is presented in figure 3. First, focusing on time point 3 (30% duration) in the left panel of figure 3, we see that the nucleus of the diphthong in *write* is raised in comparison to *ride*. On the other hand, there is essentially no difference between the height of the diphthong in the words *writing* and *riding*. Turning to the right-hand panel, which again displays the bisyllabic trochaic words *writing* and *riding*.

**Figure 3**

Pattern 2: Incipient Raising

Time-Normalized F1 of /aI/ in Minimal Set (*left*) and Bisyllable Data (*right*) from a 20-Year-Old Female Talker
but also includes the other trochaic words Nike, bison, spider, cyber, and tiger, we see is that this talker does not show a consistent pattern of raising based on the voicing specification of the medial consonant: at 30% duration, the /al/ of cyber and Nike are the highest and that of bison is the lowest.¹ Recall that speakers produced three repetitions of the stimuli list, meaning that each F₁ track plotted below is averaged across three repetitions.

Noteworthy is the wide range of F₁ values displayed in the graph. Figure 4 shows a second example of pattern 2 raising, from a 53-year-old female talker who displays /al/-raising in monosyllables but not in bisyllables. Her data are similar to the talker in figure 3 except that tiger rather than bison displays the lowest diphthong nucleus among the bisyllabic words.

Figures 3 and 4 are representative of almost all of our pattern 2 talkers: seven of the nine pattern 2 talkers show raising before voiceless consonants in monosyllabic words but no clear differentiation based on voicing in bisyllabic words. Consequently, if the pattern 2 speakers whose data are shown in figures 3 and 4 are like Joos’s group B Toronto talkers, they may help elucidate the nature of Dialect B. More specifically, what the data suggest is that the Dialect B talkers not only did not raise before the t-flap of writer but that they would not have raised in any two-syllable trochaic word.

The observation that most of our pattern 2 speakers do not raise in any of the bisyllabic data begs the question regarding the Fort Wayne pattern 3 talkers, who raise in both write and writing (with a t-flap): do such talkers raise in bisyllabic forms more generally? An examination of the data reveals that

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¹ Recall that speakers produced three repetitions of the stimuli list, meaning that each F₁ track plotted below is averaged across three repetitions.
pattern 3 speakers display two subpatterns: six of the eight pattern 3 talkers raise only before \(t\)-flaps (as in *writing*) and not in words like *Nike*, while two of the eight have raising before \(t\)-flaps and also show some raising before voiceless consonants, as in *Nike* and *bison*. These two patterns are displayed in figure 5a and 5b, respectively.

Figure 5a shows a 21-year-old female talker who, as seen in the left panel, has raising in both *write* and *writing* when compared with *ride* and *riding*, respectively. As seen in the right panel of figure 5a, however, there

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**Figure 5**

Pattern 3 Talkers

Time-Normalized F1 of /aI/ in Minimal Set (left) and Bisyllable Data (right)

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**a. 21-Year-Old Female Talker with Raising in Bisyllables Only before \(t\)-Flaps**

![Graph showing F1 (Hz) over Time Point (10% intervals)]

**b. 21-Year-Old Female Talker with Raising in Bisyllables before \(t\)-Flaps and Other Voiceless Consonants**

![Graph showing Average Duration (ms) and F1 (Hz) over Time Point (10% intervals)]
is no clear pattern of more generalized raising before voiceless consonants in the bisyllabic words. While the diphthong in *writing* is highest, what is more important than its absolute height is its position in relation to the diphthong in *riding*: given that these items form a minimal pair, they must be compared with one another when assessing whether one is raised. Of the remaining bisyllabic items shown in the right panel, it is the diphthongs in *cyber* and *bison* that are highest, while those in *Nike* and *spider* are lowest. There is no consistent patterning based on the voicing specification of the following consonant.

In figure 5b are data from a 21-year-old female talker for whom raising occurs—or is beginning to occur—in more bisyllabic contexts. The left-hand panel illustrates that *writing* is raised when compared with *riding*; the right-hand panel illustrates that *Nike* and *bison* are next highest after *writing*. To be clear, the raising in *Nike* and *bison* is not robust, and in fact at 30% duration (time point 3) they pattern with the diphthong in *riding*. Both have clear offglide peripheralization, however, which is a likely precursor to more advanced raising (see Moreton and Thomas 2007). As such, we consider this pattern 3 talker—and the other talker who patterns in this way—to be more advanced raisers: raising is beginning to affect not only those items with a *t*-flap that are involved in a paradigm relationship with monosyllables that raise (e.g., *write*—*writing*) but also bisyllabic items where the diphthong occurs before a surface-voiceless consonant. Another way to think about these data is to note that, in contrast with the other patterns we have considered thus far, the prevoiceless diphthongs are at least beginning to pattern together, thus distinguishing the speaker in figure 5b from the one in figure 5a.

Figures 3–5 provide a representative overview of */aI/*-raising in bisyllabic trochaic words among our Fort Wayne area speakers who raise before voiceless consonants in monosyllables (patterns 2 and 3). Three patterns are evident: some talkers do not raise in bisyllables at all (figures 3 and 4), some raise in bisyllables only before a *t*-flap (figure 5a), and some raise in bisyllables more generally, both before *t*-flaps and before other voiceless consonants (figure 5b). What seems to be missing is purely phonetic raising, that is, when raising occurs only before voiceless consonants, whether in monosyllabic or polysyllabic words, but not before *t*-flaps. Only two speakers in our data (out of 27 total) clearly exemplify this pattern. These are the remaining pattern 2 talkers—the two of nine who diverge from the patterns shown in figures 3 and 4. Data from one of the phonetic raisers is shown in figure 6. These data are from a 31-year-old female talker. The panel on the left shows clearly that the talker fits pattern 2 of Berkson, Davis, and Strickler (2017), where there is raising in *write* as opposed to *ride* while the diphthongs in *writing* and *riding* pattern together. The bisyllabic data in the right-hand panel illustrates that
Nike and bison are produced with the most raised variants of the diphthong, having the lowest F1 values in the region of the diphthong nucleus and the most offglide peripheralization. Considering that only two of 27 talkers in our data display what would be expected in a purely phonetic pattern of /aI/-raising, we are left to hypothesize that while purely phonetic raising can occur it is very uncommon.

In this section we have acoustically documented the occurrence of the elusive Dialect B pattern of /aI/-raising displayed by the Fort Wayne area pattern 2 talkers. Table 1 below provides a review of the patterns presented and a distribution of talkers by pattern.\(^2\) By considering data on trochaic words such as Nike and bison in addition to writing and riding, we are able to show that almost all pattern 2 (Dialect B) speakers raise neither before t-flaps nor before voiceless consonants in bisyllabic words more generally. We can speculate that this may have been the case with Joos’s (1942) group B speakers. In considering trochaic words more generally, we also find that for the Fort Wayne pattern 3 (Dialect A) talkers there are two other groups: those who raise in bisyllables only before t-flaps and those who raise both before t-flaps and before voiceless consonants more generally. Least common in our data is the purely phonetic pattern of raising where raising occurs before surface-voiceless consonants in both monosyllabic and bisyllabic word forms but not before t-flaps.
Unlocking the Mysteries of Dialect B

Documenting the incipient patterns of /au/-raising among Fort Wayne area speakers, including an examination of bisyllabic word forms, allows us to hypothesize about what may have happened to Joos’s (1942) group B speakers, who raised in words like type and write but not before t-flaps, thus producing typewriter as [tairtaIr]. Based on our Fort Wayne data, we can now posit that Dialect B, like pattern 2, represents the situation in which raising occurs in monosyllables and not in bisyllables. In this section, we will argue that our data on /au/-raising in Fort Wayne is different from that of the other varieties of /au/-raising discussed in the published literature, with the exception of Joos (1942): our data, and the Toronto dialect highlighted in Joos (1942), truly represent incipient raising varieties, while the varieties reported on elsewhere are more advanced.

While the original motivation for our study was the casual observation that college students at Indiana University hailing from the Fort Wayne

### Table 1

<table>
<thead>
<tr>
<th>Pattern</th>
<th>Description</th>
<th>Sex</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No raising (3 speakers)</td>
<td>Female: 48, 49</td>
<td>Male: 67</td>
</tr>
<tr>
<td>1</td>
<td>(Almost) incipient (7 speakers)</td>
<td>Female: 20, 78</td>
<td>Male: 21, 24, 44, 49, 57</td>
</tr>
<tr>
<td>2</td>
<td>Incipient raising (9 speakers)</td>
<td>a. Full raising, monosyllables only</td>
<td>Female: 20, 27, 53, 54, 60</td>
</tr>
<tr>
<td></td>
<td>b. Raising before surface voiceless consonants in monosyllabic and bisyllabic items</td>
<td>Female: 19, 31</td>
<td>Male: —</td>
</tr>
<tr>
<td>3</td>
<td>Phonological raising (8 speakers)</td>
<td>a. Raising in the preflap environment</td>
<td>Female: 21, 21, 21, 35, 47</td>
</tr>
<tr>
<td></td>
<td>(write raised as compared with ride, writing compared with riding); no raising in other bisyllabic items (e.g., bison)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>b. Same as above (raising with write, writing) and more general raising/offglide periph. in bisyllabic words (e.g., bison)</td>
<td>Female: 21</td>
<td>Male: 19</td>
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area seemed to display /aʊ/-raising only within the past 10–15 years, aspects of the data themselves—rather than our intuition that this sound change is relatively new—are most suggestive of the incipient nature of Fort Wayne /aʊ/-raising. First, unlike data reported for /aʊ/-raising in Canada (e.g., Kaye 2012; Pater 2014), upstate New York (Vance 1987), Vermont (Roberts 2007), the Chicago area (Kilbury 1983), Philadelphia (Fruehwald 2016), Ann Arbor (Dailey-O’Cain 1997), and the Mississippi dialect (Moreton 2016), our Fort Wayne talkers do not show clear evidence of extension of raised /aʊ/-variants to exceptional environments such as to words like spider, tiger, and fire. All of the above studies report extensions of raising in one or more of these environments. None of our Fort Wayne /aʊ/-raisers systematically raise in these environments. While data regarding the /aʊ/ in fire is not included here, none of our speakers raise in this word. Most noteworthy is the lack of raising in spider. Fruehwald (2013, 114–15) observes that the only words in the PNC in which there are multiple instances of /aʊ/-raising in an unexpected environment (i.e., not before a voiceless consonant or before a t-flap) are the words spider and Snyder. Through the longitudinal data that the PNC provides, Fruehwald concludes that raising in spider and Snyder started 20–30 years after prevoiceless raising began. The diphthong in spider is consistently low in all of the figures presented herein, however, and this is representative of our talkers as a whole. That we have found no evidence of raising in spider in our Fort Wayne data is consistent with the claim that it is an incipient variety.

A second reason that we believe that /aʊ/-raising in the Fort Wayne area is truly incipient is the observation discussed in Berkson, Davis, and Strickler (2017) that all our /aʊ/-raisers have raised variants in words like citation, psychotic, and Titanic, where the voiceless consonant following the diphthong is not foot-internal. Raising in these words may be somewhat surprising in light of the observation that in the studies that report on these words, such as Chambers (1973, 1989) for Canadian /aʊ/-raising, Vance (1989) for upstate New York, Daily-O’Cain (1997) for Ann Arbor, and Moreton (2016) for Mississippi, raising is blocked in this environment. That is, raising only occurs when /aʊ/ and the following voiceless phoneme are foot-internal (i.e., raising does not occur before a voiceless consonant that is at the beginning of the syllable with primary stress). Following a suggestion in Berkson, Davis, and Strickler (2017), we posit that the foot-internal environment arises with a subsequent (nonincipient) generation of /aʊ/-raisers. This is based on the observation from the first-language phonological acquisition literature on English that children often impose foot-based constraints on the distribution of allophony as part of the acquisition process (e.g., Inkelas and Rose 2007; Davis 2010; Rose and Inkelas 2011). Consequently, the fact that Fort Wayne /aʊ/-raising is not metrically conditioned is consistent with its incipient nature.
The third observation that argues for Fort Wayne /au/-raising being incipient is its similarity to what is reported by Joos (1942) for the Toronto public school students. First, the Joos’s group B (i.e., Dialect B) and our Fort Wayne pattern 2 speakers are the only documented cases where /au/-raising fails to occur before a t-flap. And second, Joos’s group A speakers (like our pattern 3 Fort Wayne speakers) did not seem to extend /au/-raising into exceptional environments, such as into items like fire or spider. This is implicit in Joos’s (1942, 143) comment regarding group A speakers, “it need not be long before we hear high diphthongs before /b, g/ also, in contrast with low diphthongs,” suggesting that such extensions had not yet occurred at the time of Joos’s writing. This is consistent with the incipient nature of /au/-raising for both of Joos’s (1942) group A and group B speakers as well as with Chambers’s (1989, 86) conclusion that “Canadian Raising appears to have become entrenched in the 1930s, or perhaps the 1920s, allowing for the gap between its entrenchment and its first notice in print.” Thus, one can maintain that the /au/-raising of our Fort Wayne area talkers and the Toronto public school students of Joos (1942) truly reflect an incipient pattern of /au/-raising.4

WHATEVER DID HAPPEN TO DIALECT B?

As noted previously, both Chambers (1973) and Kaye (1990) specifically comment on the disappearance of Dialect B. Chambers (1973, 122) observed, “In the three intervening decades Dialect B has disappeared and Dialect A is ubiquitous throughout heartland Canada.” Kaye (1990, 262) agrees, asking, “Whatever happened to Dialect B?”

In order to address this question, we pursue the implications of a speculative comment of Joos (1942, 144) in the last paragraph of his article as to the future course of raising concerning “whether Group A or Group B sets the standard. There is no use guessing which will happen. It would not even help us if we should count noses today, for it may be that the smaller group is gaining recruits faster.” This is an interesting comment because Joos assumes that one of the varieties (group A or group B) will fall by the wayside. With the hindsight of the research on /au/-raising over the past 50 years and the lack of subsequent documentation of group B, we now know that group A set the standard and can hypothesize about how that happened: group B speakers most likely become group A speakers, assuming that they did not move away from an area that had raising. We agree with Joos’s speculation that counting noses today would be of no help in determining the future course of /au/-raising in Fort Wayne. Moreover, we are of the view that just as Joos’s group B speakers could not be found in Toronto 30 years later, so
too will be the fate of the Fort Wayne pattern 2 speakers. Assuming they do not move to an area lacking /æɪ/-raising, they will probably come to have a pattern 3 (Dialect A) distribution where raising occurs before t-flaps. Like Dialect B, pattern 2 will disappear.

Given the incipient nature of Fort Wayne /æɪ/-raising and that our data collection included bisyllabic trochaic words, such as *Nike*, *bison*, *tiger*, and *spider*, we are now in position to answer Kaye’s question. Considering the range of patterns found in Fort Wayne area talkers and following a suggestion by Bermúdez-Otero (2017), we hypothesize that nothing actually happened to Dialect B, because it never existed: it is not a separate dialect, because it is not an end point. Instead, it is an incipient variety of Dialect A where raising obtains in monosyllables but not in trochaic word forms. This is why Joos found talkers who raised /æɪ/ in *type* but not in *writer*. We hypothesize that the pattern Joos observed has nothing to do with issues of rule ordering or phonological opacity per se (as in Chambers 1973; Idsardi 2006; among others), but rather with the contrast between monosyllabic and bisyllabic words, similar to our pattern 2 incipient raisers. Type, being a monosyllabic word form, maintains raising even in a compound like *typewriter*. On the other hand, *writer*, being bisyllabic, would not raise (whether in a compound or not). We suggest that Dialect B (or pattern 2) raisers who remain in an environment where raising is a sound change in progress become Dialect A (or pattern 3) speakers, and that Joos’s group B speakers could have retained that pattern (i.e., no raising before t-flaps) only if they moved to an area that lacked Canadian raising. Echoing Joos’s (1942, 142) speculative comment, we too take the position that the two patterns will not continue to exist as separate for long in the same community.

The composite Fort Wayne /æɪ/-raising data allows us to speculate as to how the so-called Dialect B pattern of raising can progress into the Dialect A pattern. One can view the pattern 2 (Dialect B) raising as a sound change in progress that affects one-syllable words that end in a voiceless consonant before it affects two-syllable words, such as *Nike*. Once raising occurs in monosyllables, it can then progress and begin to occur in bisyllables. Our data suggest that for the clear majority of talkers, the first bisyllables that have raising are those that are in a paradigm relation with a monosyllabic counterpart, so that raising will occur in a word such as *writing* before it will occur in a word such as *Nike*. Similarly, it will occur in a word such as *biking* before it will occur in a word such as *Nike* or *bison*. From there, raising will progress to other bisyllabic words such as *Nike* and *bison*, in which /æɪ/ precedes a voiceless consonant. On this view, pending additional research, the two talkers who have the purely phonetic pattern in which raising occurs before voiceless consonants in both monosyllabic and bisyllabic forms but
not before a $t$-flap (exemplified by the data in figure 6) represent a possible but uncommon pattern. We suspect that they will soon begin to raise before $t$-flaps as well. The scenario presented here regarding the future direction of Fort Wayne pattern 2 speakers aligns with our hypothesis about the Toronto group B speakers. Absent evidence to the contrary, we assume that those speakers did not raise in any bisyllables.

Importantly, however, we do not want to claim that the progression outlined above represents a developmental path. Speakers might pass through “stages” before arriving at phonological raising (i.e., raising in bisyllables both before voiceless consonants and $t$-flaps), but they can skip the stages and have a phonological raising pattern from the very beginning once they start raising. That is, pattern 3 talkers (or group A speakers in Joos 1942) do not have to go through a pattern 2 (group B) stage. We base this on the observation that some Fort Wayne speakers of pattern 0 and pattern 1 who do not show raising in monosyllables nonetheless have offglide peripheralization before voiceless consonants and $t$-flaps. This suggests that if such speakers start to raise, they might do so in a phonological manner before voiceless consonants and $t$-flaps without ever going through the more phonetic stage in which there is no raising before $t$-flaps. In this way, we agree with Fruehwald (2016) that /au/-raising can be phonological from its initial occurrence in a dialect, but, as we have shown here and in Berkson, Davis, and Strickler (2017), a phonetic-like stage can be documented.

It is our view that the earliest stage of raising—referred to as pattern 1 in Berkson, Davis, and Strickler (2017)—occurs in the very context where raising does not occur in documented phonological varieties, that is, in the exceedingly short prestress diphthongs of items such as citation, psychótic, and Titánic. Figure 7, taken from Berkson, Davis, and Strickler (2017, e187), illustrates that these diphthongs are quite high for pattern 1 talkers from Fort Wayne. These very short vowels are also less diphthongal than those found in monosyllables. We interpret this as follows: a degree of undershoot occurs in very short contexts, and this effectively increases the range of F1 values associated with /au/ diphthongs. Functionally, this creates an inroad for /au/ nuclei into the lower frequencies associated with raised vowels. Note too that for this pattern 1 talker there is offglide peripheralization in the monosyllabic item cite.

If this is true, the life cycle of /au/-raising is not only complex but also dependent on behavior in specific contexts; insight into the behavior of items like citation and titanic and like Nike and bison is crucial, but these items are not easy to capture in sociolinguistic interviews, nor has their possible importance to the onset of /au/-raising been recognized; consequently, their role in the development of this sound change has been difficult to capture.
CONCLUSION

In this article we have acoustically documented incipient /æl/-raising in the area of Fort Wayne, Indiana, with a focus on the occurrence of the elusive Dialect B pattern of /æl/-raising as displayed by the Fort Wayne area pattern 2 talkers. By providing data on trochaic words such as Nike and bison in addition to writing and riding, we are able to elucidate both the Dialect B patterns in which raising for most speakers occurs in monosyllables but not in bisyllabic words (thus the lack of raising before t-flaps) as well as the subvarieties of incipient Dialect A (pattern 3) in which some speakers raise in bisyllables only before t-flaps and others raise before t-flaps and before voiceless consonants more generally. Exceedingly rare in our data is the purely phonetic pattern in which raising occurs only before voiceless consonants, whether in monosyllabic or bisyllabic word forms, but not before t-flaps. The range of patterns found among the Fort Wayne raisers allowed us to chart a path of how the so-called Dialect B might disappear by evolving into Dialect A. As noted by Chambers (1973) and Kaye (1990), the young speakers who displayed the Dialect B pattern in the early 1940s did not display it 30 years later. We assume that our pattern 2 Fort Wayne talkers will have a similar fate, assuming that they continue to live in an area with /æl/-raising.
As a final matter to consider, if it is the case that phonetic raising (pattern 2/Dialect B) can be documented—as in the Fort Wayne data—why have previous researchers (such as Fruehwald 2013, 2016) been unable to document a prephonologization stage of raising? The answer to this is presumably complex and multifaceted. If our data are indicative, the purely phonetic raising pattern is difficult to capture because it is uncommon (only two of 27 speakers in our data have a phonetic raising pattern). With regards to an incipient pattern like our pattern 2, which is a somewhat phonetic pattern mediated by additional factors such as monosyllabicity and morphological complexity, previous researchers have not documented this. We do believe that this might be difficult to capture. We agree with Fruehwald (2016) that phonologization may happen very quickly, making it easy to miss. Consequently, it is absolutely crucial to look at many two syllable words with voiceless consonants—especially low-frequency monomorphemic items such as Nike and bison that are unlikely to occur with any regularity in the type of sociolinguistic interviews that often provide the data for studies on /aI/-raising. Finally, we suspect that there is something inherent to the /aI/ diphthong that makes variation more likely to be overlooked until it has truly stabilized. See, for example, the right panel of figure 5a, where there is a tremendous amount of spread in the F1 range of diphthong nuclei. For many reasons, then, raising may be easy to miss in the incipient stage. Nevertheless, it is possible to do so, as evidenced by the Fort Wayne data. These data shed light on the incipient stage of /aI/-raising, allowing us to finally answer Kaye’s question about Dialect B. “What ever happened to dialect B?” Nothing; it was an incipient stage of Dialect A and evolved into the robustly documented phonological raising pattern.

NOTES

Preliminary versions of this article were presented at the 46th annual conference on New Ways of Analyzing Variation (NWAV 46) in Madison, Wisconsin, in November 2017 and at the 26th Annual Manchester Phonology Meeting (MFM 26) in May 2018. Versions were also presented at the University of New Mexico and Oklahoma State University in February and March 2017, respectively. We thank the audiences at these venues for their comments. We have particularly benefitted from discussion with Adam Albright, Ricardo Bermúdez-Otero, and Josef Fruehwald and are also grateful for input from Wendy Herd, José Hualde, Ian Maddieson, Elliott Moreton, Markus Pöchtrager, Dennis Preston, Colin Wilson, and the two anonymous reviewers. As always, we have benefitted from input from others but take sole responsibility for any errors and shortcomings.
1. Some speakers of American English produce *bison* with a voiced medial consonant: [baːzən] or [baːzɪn]. This is not true for any of the talkers included in the current study. Additionally, when considering the *Nike* data herein it is important to note the way in which nasal formants and antiformants can affect measurements of F1 in following vowels. While measures herein have been hand-checked for accuracy, the influence of the preceding nasal on F1 is still evident, as expected.

2. The tabulation presented here differs slightly from that found in Berkson, Davis, and Strickler (2017) in order to reflect our evolving understanding of the raising continuum.

3. In relation to our casual observation that college students at Indiana University from the Fort Wayne area seemed to display /aI/-raising only within the past 10–15 years, it is worth mentioning the recent study by Strelluf (2018) that documents the advancement of /aI/-raising in the area in and around Kansas City. While only some subjects in Strelluf’s sample who were born before 1990 met the threshold for raising (the oldest one being born in 1964), Strelluf documents an explosion of /aI/-raisers among talkers born after 1990. Two-thirds of his sample who were born in 1990 or thereafter show raising, suggesting that /aI/-raising has become more common in the Midwest more generally among those born in or after the 1990s.

4. As noted by a reviewer, raising may have been present in Ontario for many decades by the time Joos was collecting data. In addition to Chambers’s (2006) suggestion that the beginnings of Canadian raising may go back before the 1920s, Thomas (1991) examined recordings from communities in and around Ontario that were archived in the Linguistic Atlas of the Middle and South Atlantic States (https://lingatlasproject.weebly.com/lamsas.html) and the Linguistic Atlas of the Central States (https://lingatlasproject.weebly.com/lancs.html) and found evidence of raising in speakers born in the late 1800s. We consider two possibilities with regards to this finding and take the position that the incipient nature of the raising behavior outlined in Joos (1942) is not necessarily inconsistent with an earlier origin of raising. First, it could be the case that the period of incipient raising lasted far longer in Ontario than has been observed more recently in U.S. dialects of English, perhaps because the nature of social networks in early twentieth-century Canada was such that it militated against the rapid spread of the change. Raising most likely would have been incipient in different locales at different time periods before it became firmly established by the time of Chambers (1973). Second, the speakers whose data Thomas analyzed were born in the late 1800s and early 1900s but were recorded in the 1940s or 1950s. As such, the raising they display may not have been present in their youth; rather, they may have acquired it more recently via accommodation. We entertain this possibility because, anecdotally, /aI/-raising is a feature to which some speakers can fairly easily accommodate. We also hypothesize that the data presented in Thomas (1991) may provide an important clue to the origins of raising. Specifically, incipient /aI/-raising may in fact be present in many dialects of English for long periods of time at levels that escape observation in the absence of careful
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5. See Kaye (2012) for additional arguments against the claim that raising involves rule ordering and phonological opacity.

6. While we do not discuss the phonetic reasons why raising occurs before a voiceless consonant, our phonetic data are mostly consistent with both a prefortis clipping analysis of raising (Bermúdez-Otero 2014, 2017) and an offglide peripheralization analysis of raising (Thomas 2000; Moreton and Thomas 2007) because in most of our data both clipping and peripheralization occur in monosyllabic words that end with a voiceless consonant.

7. An important question that we do not address here is what the relevant paradigm relation is. For example, while raising readily applies in knife, it usually does not apply in knives where there is irregular voicing of /f/ (Josef Fruehwald, pers. comm., May 30, 2018; see also Moreton 2016). Assuming that the irregular plural knives constitutes a different lexeme than its singular counterpart knife, it may be that the paradigm relation involves word forms that are part of the same lexeme. Since the verbal word form writing is part of the same lexeme as the verb write, the paradigm relation applies even if writing is used as a gerundive nominalization. Obviously, this matter is in need of further investigation, but see Moreton (2016) for a detailed discussion on how different types of affixation in English may affect /au/-raising.

REFERENCES


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